

ABSTRACT OF THE DISCLOSURE

Devices that couple to high voltage transmission lines obtain power themselves using the body capacitance of an element of the devices. The devices generate a comparatively lower voltage from the current flowing between the high voltage line and the element of the device that generates the body capacitance. The devices can be used to operate sensors that monitor the transmission lines or parameters of the power distribution system, such as current, line temperature, vibration, and the like. The devices can also be used as indicators, such as aircraft warning lights, information signs, etc. In addition, the devices can operate as RF transmission/reception or repeater devices, radar devices, mesh networking nodes, video/audio surveillance, sound emitting devices for scaring animals, drones that traverse the power line, etc. Because the devices operate in response to line voltage rather than current, the devices are reliable even in low current conditions.